

## REMARKS

Claims 1-3, 6, 7 and 9-32 are pending in the application. Claims 1-3, 6, 7 and 9-32 stand rejected. Claims 4, 5 and 8 stand withdrawn. The Examiner's objections and rejections are addressed below in substantially the same order as in the office action.

### ***Claim Rejections - 35 USC 5 103***

Claims 1-3, 6-7,18, 22-24 and 32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Winbow (US5268537) in view of Dedole (US4699240).

With respect to independent claims 1 and 22, the Examiner contends that Winbow teaches all of the recitations of claim 1 but does not disclose “wherein the cavity and said drive source form a closed loop through which said fluid flows.” However, the Examiner contends that Dedole discloses a closed loop through for fluid flow comprising a cavity and a drive source for generating seismic waves (abstract). The Examiner further contends that at the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Dedole to use a closed loop system with the teachings of Winbow to have a drive source in conjunction with a fluid filled cavity for generating seismic waves. The Examiner states that the motivation for doing so would have been that a closed loop would allow for ease in use of the device remotely, needing only to transmit electrical signals through a cable rather than pulsing fluid a long distance to provide a signal.

Applicant observes that Winbow and Dedole teach two devices that utilize different operating principles. Winbow device generates “a seismic wave in borehole that radiates through a substantial length of the bore” and that the length of the source is “extended.” (Col. 2, lines 49-53). Such a device is operationally different from Dedole, which concentrates a radial force via pads forced against a borehole wall. While not express, Winbow appears to suggest that the concentrated forces (e.g., as provided by airguns) can damage a borehole wall. More importantly, Winbow expressly teaches away from using a downhole closed loop system. In col. 2, lines 39 to 42, Winbow

asserts that the prior art “requires downhole moving parts leading to lower field reliability.” Also, in col. 2, lines 63-64, Window explains that the disclosed device “does not require complicated downhole moving parts.” Thus, the Examiner’s proposed modification of the Winbow device with the Dedole system conflicts with the express teachings of Winbow against using “complidated downhole moving parts.”

Thus, Applicant submits that the rejection of claims 1 and 22 is improper because the proposed combination is not proper.

With respect to claims 2, 3, 6, 7, 18, 22-24 and 32, these claims are allowable as depending from an allowable base claim.

Claims 9 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Winbow (US5268537) in view of Dedole (US4699240) as applied to claims 1 and 22 above, and further in view of Stangroom (W09750077). As discussed above, the combination of Winbow and Dedole is not proper, thus the rejection of claims 9 and 25 is also not proper and should be withdrawn.

Claims 10-14, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winbow (US5268537) in view of Dedole (US4699240) and Stangroom (W09750077) as applied to claim 9 above, and further in view of Wassell (US6257356). As discussed above, the combination of Winbow and Dedole is not proper, thus the rejection of claims 10-14, and 26-29 is also not proper and should be withdrawn.

Claims 15- 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Winbow (US5268537) in view of Dedole (US4699240), Stangroom (W09750077) and Wassel (US6257356) as applied to claim 14 above, and further in view of Varsamis (US6366531 ). As discussed above, the combination of Winbow and Dedole is not proper, thus the rejection of claims 15- 17 is also not proper and should be withdrawn.

Claims 19-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Winbow (US5268537) in view of Dedole (US4699240) as applied to claim 18 above,

and further in view of Varsamis (US6366531). As discussed above, the combination of Winbow and Dedole is not proper, thus the rejection of claims 19-21 is also not proper and should be withdrawn.

### **New Claims**

With respect to new claims 33 and 34, the prior art does not show a closed loop system that is positioned external to a wellbore tubular that conveys a fluid to a surface location. The tube 5 of Winbow is part of the system that supplies energy to the borehole source and thus is not a closed loop system. Thus, Applicant submits that new claims 33 and 34 are allowable.

With respect to new claims 35 and 36, the prior art does not show a system / method having a fluid reservoir and a pump, wherein the fluid circulates from the reservoir to a pump and from the pump to the cavity. Rather, in Winbow, the fluid flows between the annular space and the choke. Thus, Applicant submits that new claims 35 and 36 are allowable.

**CONCLUSION**

For all the foregoing reasons, Applicant submits that the application is in a condition for allowance and such an action is requested. The Commissioner, however, is authorized to charge any fee that may be due or credit any overpayment related to the filing of this paper to Deposit Account No. **13-0010 (054-14966-USCP)**

Respectfully submitted,

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